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Reply to Office action of April 14, 2005

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Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (currently amended) A composition comprising a liquid metal, a particulate filler, and a resin, wherein said liquid metal and particulate filler are present in a ratio of about 2:1 by weight to about 1:10 by weight, and, the composition has a dissipation factor of less than about 0.01 at about 10kHz when cured.

Claim 2. (currently amended) The composition of claim 1, wherein the liquid metal is selected from the group consisting of gallium, indium, mercury, metallic glasses, and alloys, ~~and combinations~~ and mixtures thereof.

Claim 3. (original) The composition of claim 2, wherein the liquid metal is selected from the group consisting of gallium, gallium alloys, and mixtures thereof.

Claim 4. (original) The composition of claim 1, wherein the particulate filler is selected from the group consisting of metal oxides, metal nitrides, coated metallic particles, and coated ceramic particles.

Claim 5. (currently amended) The composition of claim 1, wherein the particulate filler is selected from the group consisting of aluminum oxide, aluminum nitride, boron nitride, graphite, carbon nanotubes, diamond, magnesium oxide, zinc oxide, zirconium oxide, titanium oxide, chromium oxide, silica coated aluminum nitride, glass coated silver, alumina coated silver, alumina coated aluminum, ~~and combinations~~ and mixtures thereof.

Claim 6. (original) The composition of claim 1, wherein said particulate filler is aluminum oxide.

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Claim 7. (currently amended) The composition of claim 1, wherein said resin comprises at least one of silicone resin, epoxy resin, or acryloxy resin ~~and combinations and mixtures thereof~~.

Claim 8. (currently amended) The composition of claim 7, wherein said resin ~~comprises~~ comprises a silicone resin and said silicone resin is an addition curable silicone resin.

Claim 9. (original) The composition of claim 1 further comprising an adhesion promoter.

Claim 10. (original) The composition of claim 9 wherein the adhesion promoter is selected from the group consisting of alkoxysilanes, aryloxysilanes, alkoxysiloxane, and aryloxysiloxane.

Claim 11. (currently amended) The composition of claim 1, wherein the liquid metal and particulate filler are present in a combined amount of about 20 weight % to about 95 weight %.

Claim 12. (currently amended) The composition of claim 11, wherein the liquid metal and particulate filler are present in a combined amount of about 60 weight % to about 95 weight %.

Claim 13. (original) The composition of claim 1 further comprising a catalyst.

Claim 14. (canceled)

Claim 15. (currently amended) A composition comprising a liquid metal selected from the group consisting of gallium, gallium alloys, and mixtures thereof, an aluminum oxide particulate filler, and a silicone resin, wherein said liquid metal and particulate filler are present in a ratio of about 2:1 by weight to about 1:10 by weight, and the

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particulate filler has an average particle size in a range from about 0.01 microns to less than 1 micron.

Claims 16.-26. (canceled)

Claim 27. (new) The composition of claim 1 wherein the composition has a dissipation factor of less than about 0.001 when cured.

Claim 28. (new) The composition of claim 15, wherein the particulate filler has an average particle size in a range of from about 0.01 microns to about 0.1 microns.

Claim 29. (new) The composition of claim 15, wherein the composition has a bond line thickness in a range of from about 0.001 microns to about 1 micron when cured.

Claim 30. (new) The composition of claim 15, wherein the composition has a bond line thickness in a range of from about 0.001 microns to about 0.1 microns when cured.

Claim 31. (new) The composition of claim 15, wherein the composition has a dissipation factor of less than about 0.01 at about 10kHz when cured.

Claim 32. (new) A composition comprising:
a liquid metal comprising gallium or a gallium alloy;
a particulate filler having an average particle size in a range of from about 0.01 microns to less than 1 micron; and
a silicone resin.

Claim 33. (new) The composition of claim 32, wherein the particulate filler has an average particle size in a range of from about 0.01 microns to about 0.254 microns.

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Claim 34. (new) The composition of claim 32, wherein the composition has a bond line thickness in a range of from about 0.1 times to about 1 times the average particle size.

Claim 35. (new) The composition of claim 32, wherein the composition has a bond line thickness of about 0.01 mils when cured.

Claim 36. (new) The composition of claim 32, wherein the particulate filler is coated, and comprises one or more of silica coated aluminum nitride, glass coated silver, alumina coated silver, or alumina coated aluminum.

Claim 37. (new) The composition of claim 32, wherein the particulate filler comprises one or more of graphite, carbon nanotubes, or diamond.

Claim 38. (new) The composition of claim 32, wherein the particulate filler comprises one or more of magnesium oxide, zirconium oxide, titanium oxide, or chromium oxide.

Claim 39. (new) The composition of claim 32, wherein the composition has a dissipation factor of less than about 0.01 at about 10kHz when cured.

Claim 40. (new) The composition of claim 35, wherein the composition has a dissipation factor of less than about 0.001 at about 10kHz when cured.